



UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.

THE EXTENSION POULTRY HUSBANDMAN

Issued by the Bureau of Animal Industry and the  
Division of Cooperative Extension, Cooperating,  
H. L. Shrader, Senior Extension Poultry Husbandman.

Serial Number 8 --

July 1938

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## THE INCOME APPROACH TO THE EXTENSION PROGRAM\*

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There are adequate reasons for considering net income as a logical and fundamental approach to the basic problem of building an effective extension program. The entire farm and home business in this day of increased specialization revolves around a need for money and net income to pay marketing expenses, and relatively fixed overhead costs. To a lesser extent than formerly, diversification, particularly in small units occupies a less important place. Farm family living is more dependent on cash income to fulfill the requirements of a satisfactory, adequate life.

Quite generally, in our own thinking, as well as in the presentation of subject-matter recommendations, the dollar and cents appeal is preeminent. Analysis as to the effect upon net poultry income and net farm income constitutes the "acid test" as to the practical value of a specific recommended practice or our entire program. Quite frequently, however, producers think in terms of gross income.

The manner in which the program is received by the producers is primarily dependent upon its net income appeal. The extent to which we are successful in securing action depends upon this factor and the possibilities poultry production holds for making a net income at any specific time.

The income approach should involve consideration of the entire farm income picture, the relation of the poultry enterprise to such income, and labor distribution. Such consideration is basic in developing a State program having a sufficient adaptability to fill type-of-farming area needs and to supply the answers to individual community problems. It is wholly possible to develop a poultry program, which when applied to a single farm, would result in a profitable poultry enterprise. However, if the farmer went bankrupt because of losses in other phases of the farm business, the plan itself would be a failure.

In a like manner it is necessary to consider the entire field of producing and marketing poultry products rather than the somewhat common tendency to be concerned with only phases or sub-projects. For example, it is easy to get excited about the number of producers who follow recommendations for brooding chicks on clean ground and as a result are able to solve mortality

\*Talk delivered in the Extension Section of the Poultry Science Association Meeting at Madison, Wis., in August, 1937.



problems during the development period to an appreciable extent. Yet, the adoption of these sanitation practices does not insure success. The program must be concerned with all the problems that influence the income including housing, management, and all the other phases of the entire problem of obtaining net income from poultry. The relation and importance of these phases of the problem are generally recognized. However, the extension program must be carried out to coordinate them for producers.

In the tendency to break down our programs and plan emphasis on individual practices, there is danger that we may lose the perspective of the complete or whole problem and thus fail to achieve the net-income goal.

College teachers, experiment station workers, and to a lesser extent extension workers themselves, are apt to get over-enthusiastic about some particular discovery with the result that it is unduly publicized while little or no attention is given to the manner in which this new bit of information fits into the solution of the whole problem. We may become enthusiastic about the role of green feeds in rations, or the value of cod-liver oil in producing pale-yolk, high-vitamin-content eggs, but unless careful analysis follows to determine that these enthusiasms have a definite, practical place in solving the problems and unless these facts are correlated with and fitted into their proper place in the whole scheme of things producers' acceptance of the idea will not follow.

Effective use of the income approach lies in determining what producer wants actually are, and then supplying the answers to these wants in terms of income.

It would seem desirable to learn a number of specific things about the poultry enterprise on a county and community basis. For example, it would be helpful to know the status of poultry raisers with respect to the farm ownership and their ability on this basis to make recommended shifts in production practices which are dependent upon physical equipment. Obviously if a majority of farmers in an area do not own their farms they are not going to be very susceptible to suggestions involving even limited expenditures for housing improvement. Yet this may be the principal problem which prevents their securing a net income even though they followed all practices necessary to mature an excellent flock of pullets. If we find such a condition in existence it might be a sound procedure to recommend liquidation of poultry and the placing of emphasis on some other farm enterprise. Or, possibly the focal point for action lies in the direction of a conference with landlords to convince them of the importance of this problem.

Information concerning the distribution of poultry population in the various sized flocks has a direct bearing upon net income. The proportion of poultry raisers having small uneconomical units and the percentage of the total State population represented in these groups may have definite bearing on the success of our program.



The producer who has a small flock of birds, representing an uneconomical unit, obviously does not depend very heavily upon poultry income. Yet, total production from these small flocks can and does have a marked seasonal effect upon receipts and the quality of the product marketed. Normally, we could not expect to secure much improvement in production practices and the quality of eggs sold from these small flocks. Consequently, there is a common tendency to ignore these producers. Yet, if such small flocks represent any appreciable percentage of the State poultry population we cannot overlook their effect on seasonal supplies and prices and the quality of the product marketed from this source. Perhaps there is a place in our program, however, to point out to these owners that these small flocks are frequently a source of lost net income at the expense of other farm sources.

Small flocks are normally the responsibility of the farm wife. The problem of uneconomical units and minute net income might be approached through discussions in home economics extension clubs using the farm home and farm business partnership line of reasoning to bring out the importance of considering the income from small poultry flocks in relation to the total farm income.

Home economics specialists in nutrition and home management should be interested in this problem. Food budgeting meetings present an opportunity to include consideration of the cost phases of food budgeting in terms of home-produced foods. Preliminary discussion of uneconomical production costs in these meetings might logically serve as the approach to the sponsorship of a county-wide meeting of men and women to discuss brooding and management phases of production as correlated with economical unit considerations and the handling of flocks intended merely to supply family needs.

Further analysis of the small flock problem brings up the question as to the causes of these uneconomical units. We have them in all States, and frequently they are not confined to any particular area. Why do they exist? Is it due to a lack of appreciation and information as to the contributions poultry can make to total farm income or is it due to greater opportunities for income from other sources?

The answer to these and many other questions will give information concerning the enterprise which present the biggest problems and require most consideration in effective program building. Knowledge is needed concerning the problems requiring the most emphasis from which greater positive results may be obtained. In addition it would be valuable to know the extent to which subject-matter material that we have been stressing has become common knowledge, commonly applied.

A survey questionnaire could provide one means of obtaining such information. It might be divided into these general subheads: (1) General information as to the size of the farm, the operating status, and the main sources of income; (2) physical equipment, involving questions dealing with



the size and type of laying houses, brooder houses and brooder equipment and their state of repair as indicated by whether or not permanent buildings have concrete floors, foundations, etc.; (3) the size of the enterprise in relation to economical unit considerations and the principal income sources; (4) the type of brooding and pullet-development practices in vogue and where deviation from good practice occurs; (5) mature bird management, practices commonly used; (6) the extent of disease and parasite problems; and (7) marketing questions to determine the status of this situation and the possibilities for success in marketing and quality egg improvement program.

After a bird's-eye, but nevertheless a graphic and accurate view of the whole problem has been obtained in this way, facts are then existent from which to formulate a State program. Such facts can then be used by county agents in building county and community programs that involve the income approach and are correlated with the general problem of farm income and poultry income.

When the production problems and producers' wants exist as known quantities it is a relatively less difficult task to proceed from demonstration results and experiment station data to the development of popular solutions to these problems involving their effect upon net income.

In building our extension programs, it seems necessary, therefore, to determine the principal problems affecting net income. Conclusions with reference to these problems certainly should be checked with producers to ascertain that our determinations are correct and that the principal problems are quite generally recognized. Producers must feel a need for the solution of these specific problems. In some instances it is wholly possible that producer recognition of a problem is lacking, and progress will be unusually slow until this can be obtained. An example of this type of problem is that of the necessity for egg-quality improvement, particularly in the Middle West, although adequate recognition of this factor is no doubt lacking to an appreciable degree in other sections of the United States. Until producers can be induced more fully to recognize the effect of egg quality on total consumption and prices, recommendations on quality improvement cannot succeed. On the other hand, there are experiences, and volumes of evidence which prove that improvements can be induced by premiums for quality. This, of course, directly affects income and provides further proof of the value of the income approach.

After such factual information has been obtained as the foundation for a program there are many other income factors which require careful consideration in planning and executing the educational activities.

One of these is the income level of the majority of producers seeking a solution of the problem. If recommendations are sound and are recognized as such, but require substantial cash expenditures which appear to be beyond the means of the average producer, few individuals will take the necessary steps. Farm flock owners may be sold on the importance of brooding chicks on clean ground, but if they have an investment in a permanent brooder house it



is almost a foregone conclusion that the chicks will be raised on the old contaminated ground. On the other hand, producers act upon the suggestion of building a dual-type sunporch and summer shelter at a cost of \$8.00 to \$10.00 to accomplish this result. The cost of this recommendation will represent less than 20 percent of that necessary for a portable brooder house. In addition it is the type of equipment that can be more easily moved from one rented farm to another if necessary.

Realization of the need for frequent marketing of eggs may exist but if the individual producer's flock is small and premiums obtained will no more than pay the gasoline bill in taking them to market frequently the eggs will not be sold often. We may have plans for an efficient farm egg cooler, but if construction costs equal or exceed probable premium receipts for a considerable period of time the cooler will not be built or installed.

Continuous scrutiny of objectives and recommendations in periods of increasing prices as well as in periods of price decline is necessary if the things being advocated today, particularly in the field of equipment investment, are to be more "fair weather" expenditures.

After all these things have been done, the problem still remains of securing county agent cooperation in thinking through his county problem rather than taking the specialist's State analysis and procedure suggestions without modification to fit local needs. In addition, coordination with educational activities in other production fields is imperative.

The farm management, 4-H Club, dairying, crops, home economics, agricultural engineering and veterinary fields offer splendid opportunity for integrated activity to round out the program and increase its scope.

In conclusion, it may also be pointed out that no single approach will produce 100 percent or even 75 percent positive results. People react to different types of reasoning. We cannot afford to overlook the pride appeal, the competition appeal, and other sociological approaches commonly observed as a part of the advertising methods used today. These psychological factors are valuable aids to supplement effort in securing the adoption of a program which is basically sound in its income approach.



## COOPERATION IN EXTENSION POULTRY HUSBANDRY

The 1938 plan of work in North Carolina gives a very interesting page which they call consultation with specialists and college departments. This illustrates the ways that the poultry program is kept well diversified in that State.

<u>Department</u>	<u>Name</u>	<u>Purpose of Conference</u>
Livestock (dairy)	J. A. Arey	Developing farm program (individual unit basis)
Agronomy	E. C. Blair P. H. Kime	Feeding and pasture recommendations
4-H Club	L. R. Harrill	Developing 4-H projects and general record work
Agricultural engineering	D. S. Weaver	Developing new house plans and construction work on rural electrification lines
Economics	J. W. Johansen	Poultry Council organization plans
Agricultural editor	F. H. Jeter, et. al	Annual reports, bulletins, news articles, radio
District agents	Men and women	General and projects for their districts
Nutrition	Mary E. Thomas	Greater use of poultry and eggs in home diet
Horticulture	E. B. Morrow H. R. Niswonger	Recommendations for shade for poultry
Forestry	R. W. Graeber	Pole or log houses, wood for brick brooder
Poultry	R. S. Dearstyne H. C. Gauger	General production and disease
Chemistry	J. H. Satterfield	Vitamins and mineral for poultry rations
Farm management	R. W. Shoffner, J. F. Criswell	Analysis of poultry records, and fitting poultry in general farm program
Department of Conservation and Development	W. C. Etheridge	World's Poultry Congress committee on exhibits
Marketing	T. T. Brown	Marketing eggs and poultry
State veterinarian	Dr. Wm. Moore	Disease eradication and regulatory work.



#### 4-H CLUB PHEASANT PROJECT

The most outstanding 4-H club work conducted during the year in Utah was the pheasant project which was conducted in cooperation with the State Fish and Game Department.

During the month of May (1937) a total of 4,903 pheasant eggs obtained without cost from the State Fish and Game farm at Springville were distributed in settings of 18 to 21 eggs to 127 4-H club boys and girls in 11 counties of the State. A summary of the 4-H club record books kept during the year indicates that 55 of the 127 boys and girls who received a total of 2,607 eggs succeeded in raising a total of 765 pheasants. At the end of the project a total of \$612 was distributed to 55 of the 127 boys and girls who were enrolled in this work.

While there are some very fine lessons that are taught by this project and the boys and girls who succeed in raising pheasants are thrilled with this project, it is believed that greater results could be obtained if the same amount of time were devoted to other 4-H club projects.

Data on 4-H Pheasant Club Project in 1937 in 11 counties

Number of club members	Number of eggs received	Number of eggs broken	Pheasants hatched	Eggs infertile	Dead embryos	Eggs missing	Number pheasants died	Number of pheasants raised
127	4,903	529	1,872	1,469	979	54	1,107	765
Percent	100	10.8	38.2	30.0	19.9	1.1	59.13	40.87

--Utah Annual Report for 1937

#### PERSONNEL CHANGES

Vermont - D. C. Henderson, who has served in South Dakota and Pennsylvania as a poultry specialist, is now with the College of Agriculture at Burlington, Vt.

Pennsylvania - F. H. Leuschner resigned as poultry specialist in Delaware and is now at the Pennsylvania State College, State College, Pa.

Utah - Carl Frischknecht has taken a year's leave of absence to pursue graduate work at the University of Maryland, College Park, Md.

Delaware - H. L. Richardson, the poultry specialist in Maine, has moved to Delaware.

Mississippi - Since J. D. Sykes saw fit to join the National Poultry Improvement Plan staff in Washington, D. C., F. Z. Beanblossom who was formerly connected with the poultry staff at Oklahoma has taken up his duties as poultry specialist.

Maine - F. D. Reed from economic work in New Hampshire to Maine.

Oregon - N. L. Bennion, when the former specialist, H. E. Cosby, took over the duties of head of the Poultry Department, moved from Utah to Oregon.



# 1937 KANSAS POULTRY SURVEY

Through the cooperation of poultry leaders in the State a poultry survey was taken during the spring months of 1937. County agents in the 103 organized counties of the 105 in the State were asked to secure one poultry leader in each township. Each leader secured was asked to fill out the survey card and have nine neighbors do likewise. As was to be expected, a large number of the survey cards were not returned but the number secured represents slightly more than 1 percent of the farms in the State and makes a fairly satisfactory sample to analyze the condition of the poultry industry.

Mr. C. R. Jaccard, extension economist and planning specialist, has assisted by summarizing and analyzing the survey data secured, which is shown in tabular form below:

Item	All farms	Percent	Owner farms	Percent	Tenant farms	Percent
Number of farms	1,873	---	1,170	62.5	703	37.5
Acres per farm	319	---	310	---	333	---
Average number hens per farm	130	---	141	---	111	---
Keeping a purebred flock	1,262	67.4	835	71.4	427	60.7
Keeping a crossbred flock	120	6.4	71	6.0	49	7.0
Keeping a mixed flock	323	17.2	190	16.2	133	18.9
Straw-loft laying houses	596	31.8	417	35.7	179	25.5
Open-front laying houses	1,162	62.0	758	64.5	404	57.5
Square feet floor space per bird	3.27	----	3.27	----	3.28	----
Movable brooder houses	763	40.7	477	40.9	286	40.7
Stationary brooder houses	825	44.0	536	45.8	289	41.1
Wire runways	382	20.4	255	21.8	127	18.1
Range shelters	338	18.0	227	19.4	111	15.8
Feeding laying mash all year	928	49.5	609	52.0	319	45.4
Feeding laying mash part of the year	632	33.7	358	30.6	274	39.0
Feeding commercial laying mash	1,008	53.8	624	53.4	384	54.7
Feeding home-mixed laying mash	761	40.6	507	43.4	254	50.4
Feeding liquid milk all year	508	27.1	316	27.0	192	27.6
Feeding liquid milk part of the year	890	47.5	569	48.6	321	45.6
Feeding a commercial starting mash	1,354	72.3	837	71.6	517	73.5
Feeding a home-mixed starting mash	354	18.9	250	21.4	104	14.8
Feeding a commercial growing mash	1,069	57.1	675	52.8	394	55.5
Feeding a home-mixed growing mash	577	30.8	363	31.0	214	30.5
Using a growing mash to maturity	914	48.8	596	51.0	318	45.2
Using a growing mash only part of growing period	620	33.1	366	31.5	254	36.2
Selling eggs to a hatchery	424	22.6	296	25.6	128	18.2
Selected breeding flock	637	34.0	435	37.2	202	28.7
Using pedigreed males	323	17.2	219	18.7	104	14.8
Moving brooder house	545	29.0	341	29.2	204	29.0
Purchasing chicks from approved or certified flocks	1,037	55.4	661	56.4	376	53.5

(continued on the following page)



1937 KANSAS POULTRY SURVEY (continued)

	All farms	Percent	Owner farms	Percent	Tenant farms	Percent
Purchasing chicks from pullorum- tested flocks	1,008	53.8	660	56.4	348	48.5
Chicks hatched in incubator	1,494	79.8	942	80.5	552	78.6
Chicks hatched under hens	350	18.7	225	19.2	125	17.6
Chicks brooded under brooder stove	1,243	66.4	795	68.0	448	63.7
Chicks brooded under hens	370	19.7	223	19.0	147	20.9
Kind of brooder stove						
a. coal	447	23.9	284	24.6	163	23.2
b. oil	779	41.6	490	42.0	289	41.1
c. electric	45	2.4	33	2.8	12	0.2
d. other	162	8.6	114	9.7	48	6.8
Using lights on laying flock						
a. electric	102	5.4	80	6.8	22	3.1
b. other	55	2.9	35	3.0	20	2.8
Housing pullets and hens separately	505	27.0	339	29.0	166	23.6
Giving flock free range	1,536	82.0	952	81.5	584	83.0
Confined to house or yard						
all year	142	7.6	94	8.0	48	6.8
Confined to house or yard part of year	1,176	62.8	742	63.5	434	61.7
Selling eggs on a graded basis						
a. all of year	207	11.0	134	11.4	73	10.4
b. part of year	409	21.8	256	21.9	153	21.8
Record of production						
a. all of year	568	30.3	372	31.8	196	27.9
b. part of year	340	18.1	200	17.1	140	20.0
Record of income						
a. all of year	480	25.6	314	26.8	166	23.6
b. part of year	284	15.2	174	14.8	110	15.7

ILLINOIS PULLET MENU

Cocktail - Cod-liver oil  
(included in mash)

Relishes - Green oats or alfalfa

Choice of

1 hopper of protein mash  
Ground grains and  
protein supplement

1 hopper of non-protein mash  
Ground grains and no  
protein supplement

Dessert

"Blue Points" - oyster shell

Beverages

Water - all you can drink and no extra charge - milk if prescribed  
Cost per pullet - 1/2 cent per day



SUMMARY OF REPORTS ON DEMONSTRATION FARM FLOCKS 1936-37<sup>1/2/</sup>  
(As furnished by 21 States)

State	Farms	Average	Eggs	Mortal- ity	Feed cost per hen	Income per hen		Feed	Selling
		size of flock	per hen			Total	Net	cost per doz. eggs	price per doz. eggs
	Number	Number	Number	Percent	Dollars	Dollars	Dollars	Cents	Cents
Ala.	136	177	171.0	20.0	2.15	3.61	1.46	15.3	26.0
Calif. <sup>3/</sup>	18	1,279	159.1	22.6	2.36	3.82	- - -	24.0	25.8
Conn.	106	606	175.8	- - -	- - -	- - -	- - -	- - -	- - -
Fla.	43	465	168.9	17.6	- - -	- - -	- - -	- - -	- - -
Ind.	95	257	150.0	14.8	1.84	- - -	0.66	14.7	23.6
Kans.	716	165	150.6	- - -	- - -	- - -	- - -	20.1	22.5
Ky.	99	125	160.0	- - -	2.50	- - -	1.54	- - -	- - -
Md.	90	353	156.9	17.1	- - -	- - -	- - -	- - -	- - -
Minn.	63	255	166.9	- - -	- - -	- - -	- - -	- - -	- - -
Miss.	182	66	155.0	- - -	1.90	- - -	1.56	16.0	25.5
Mo.									
(Farm flocks)	496	148	147.4	- - -	2.03	<sup>4/</sup> 3.00	- - -	18.0	21.5
(Comm. flocks)	31	542	163.0	- - -	2.29	<sup>4/</sup> 3.42	- - -	18.0	24.0
Mont.	48	230	162.3	13.8	1.92	- - -	1.45	16.0	28.0
N. H.	241	575	177.0	13.9	- - -	- - -	- - -	- - -	- - -
N. M.	62	162	127.0	19.1	<sup>5/</sup> 2.05	2.98	- - -	21.0	24.0
N. C.	341	180	169.1	- - -	2.07	3.75	- - -	14.9	28.0
Ohio	307	- - -	161.6	19.9	2.05	4.36	- - -	15.4	26.6
S. C.	108	163	145.0	19.0	<sup>5/</sup> 2.55	4.29	- - -	- - -	27.0
Tex.	- - -	- - -	170.8	16.5	1.45	- - -	1.40	10.7	21.2
Utah	173	667	158.0	30.6	- - -	- - -	- - -	- - -	- - -
Va.	24	129	163.4	10.4	1.93	3.79	- - -	15.0	25.3
Wis.	- - -	230	177.8	16.7	- - -	- - -	- - -	14.9	23.2

<sup>1/</sup> Records were submitted for the flock year beginning in November 1936 and ending in October 1937 by the following States: Ala., Calif., Md., Minn., Mo., Tex., Va., Wis.

<sup>2/</sup> Records were submitted for the flock year beginning in October 1936 and ending in September 1937 by the following States: Conn., Fla., Ind., Kans., Ky., Miss., Mont., N. H., N. M., N. C., Ohio, S. C., and Utah.

<sup>3/</sup> For Los Angeles County.

<sup>4/</sup> Includes fowl income.

<sup>5/</sup> Includes feed for young stock.



## SOME RESULTS OF POULTRY EFFICIENCY STUDIES IN CALIFORNIA

From a summary of 1,724 flocks having a total of over 2,100,000 hens in 24 California counties, the following conclusions have been drawn by L. W. Fluharty, extension specialist in farm management.

1. High egg production characteristics are inherent. The most efficient management practices are unlikely to produce a satisfactory profit with stock of low inherited egg laying ability.
2. The mortality problem in laying flocks is an important factor in low egg production. Mortality up to 15 percent in the flock has little effect on the number of eggs laid per hen. It has been shown that an increase in mortality from 15 to 25 percent resulted in a drop of 4.5 eggs per hen, while a further increase from 25 to 35 percent resulted in a further decline of 6.5 eggs per hen.
3. The point of diminishing returns for culling in terms of egg production per hen is reached at about 55 percent with types of stock now available to commercial poultrymen. The California poultryman should strive to provide himself with stock that has ability to live longer and produce a greater number of high-quality eggs, and thus he will reduce culling to a minimum.
4. The most efficient producers fed approximately 50 to 55 percent of the ration as mash.
5. An increase of from 15 to 35 percent in fall eggs per hen increased the average price of all eggs by 2 1/2 cents per dozen. Average net cost per dozen decreased, for the same range, 5 cents per dozen. In other words, high fall production increased selling price and decreased cost of all eggs produced.
6. On the average, heaviest fall egg production as well as heaviest total production for a year resulted in flocks where pullets were added from July through October.
7. Mortality has been greatly decreased in individual flocks during the past 3 or 4 years.
8. The most profitable flocks have been those that raised their own replacements instead of buying mature or partially-mature pullets.
9. All-in-one (all mash) feeds have given uniformly poor results when measured in terms of profits.



# BROODING SEXED AND STRAIGHT-RUN CHICKS

Kind of chicks	Chicks brooded	Mortality		Good pullets reared	
		first 8 weeks			
	Number	Number	Percent	Number	Percent
Straight-run day-old	9,396	439	4.5	2,585	89.2
Sexed day-old	15,502	793	5.1	11,803	86.2
Straight-run 10-day started	4,515	147	3.3	1,678	90.1
Sexed 10-day started	17,253	144	0.8	9,885	91.4
Total or average	46,666	1,523	3.3	1/25,951	88.7

1/ Percent good pullets: In confinement, 89.5; in yards, 90.1; and on range, 84.9

--County agent's 1937 annual report  
Pierce County, Wash.

Type of chicks	Poultry-men	Total number of chicks	Percent died 8 weeks	Pullets housed per 1,000 chicks purchased
Day-old pullets	Cooperators	2,850	4.9	423
	Others	4,735	5.3	420
Started pullets	Cooperators	13,186	1.9	443
	Others	22,870	2.0	444
Mixed	Cooperators	2,900	5.7	397
	Others	8,145	5.1	392
Average, all cooperators. . . . .			3.0	434
Average, all others. . . . .			3.1	431
Average, all. . . . .			3.0	432

--County agent's 1937 annual report,  
Lewis County, Wash.

## EGG HUMIDOR TRIAL

A home-made humidor 1/ was constructed, and placed on the farm of W. T. Putnam, Route 5, Hillsboro, Oreg. Mr. Putnam, previous to that time, had stored his eggs in the basement of his home. The humidor was placed in the back yard. Each time the eggs were gathered, half of them were placed in the humidor and half of them in the basement storage. The assistance of the Pacific Cooperative Poultry Producer's Association was secured for grading. Shipments were made each week from August 19 to November 3, 1937. The results of the test are shown below:

373 dozen eggs kept in humidor		485 dozen eggs kept in basement	
Grade	Percent	Grade	Percent
No. 1	92.1	No. 1	75.7
No. 2	4.4	No. 2	14.7
No. 3	3.5	No. 3	9.6

--County agent's 1937 annual report,  
Washington county, Oregon.

1/ For details see Oregon Extension Bulletin No. 445 "How to Construct an Insulated Egg Storage Room."



# SOURCE OF STOCK COMPARISON

Los Angeles County, Calif.

The following comparison of cooperators in 1937 points out the effect that selection of chicks has on farm income.

Item	Group 1		Group 2	
	Cooperators using chicks from stock selected as physically fit; pedigreed and selected on basis of high family average <u>1/</u>		Cooperators using chicks from stock physically selected for egg production; non-pedigreed <u>1/</u>	
Records . . . . .	number	5	13	
Average hens per flock . . . . .	do	1,029	1,376	
Average price of day-old chicks . . . . .	cents	16.3	11.5	
Income per hen. . . . .	dollars	1.36	0.95	
Average eggs per hen . . . . .	number	178.3	153.8	
Average eggs per hen(fall months) . . . . .	do	46.7	39.5	
Pullets in flock . . . . .	percent	50.5	56.2	
Mortality . . . . .	do	19.0	23.6	
Income on basis of 1,000 hens . . . . .	dollars	1,360	950	

1/ Headings revised from original copy.

Although group 1 paid an average of 4.8 cents more per chick than did group 2, this additional amount proved to be an excellent investment. Selection of breeding stock on a high family average basis requires trap-nest records, pedigreeing, and progeny testing. In addition to selection of physically fit stock, it involves careful and painstakingly accurate record keeping which increases the cost of doing business. Increased sales of chicks from breeders who are developing high family averages at prices of from 15 cents to 20 cents per chick have resulted. This will, in turn, encourage other breeders to improve their breeding practices. At present there is a very limited supply of such chicks.

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Four commercial hatcheries in Lewis County, Wash., in 1937 adopted the practice of candling all eggs for interior quality before setting.



POULTRY HUSBANDRY EXTENSION WORK IN OREGON

H. E. Cosby resigned as poultry specialist in Oregon on July 1, 1937, to take up duties as head of the Poultry Department in that State. His final annual report contains a "conclusion," that is so full of extension truths and philosophies that the editor feels that it should be given wider circulation.

"This is the 18th annual report submitted to the Extension Service organization. That is a long time to be on the firing line for the sole purpose of helping to clarify an atmosphere of confusion made thus by opinions, ignorance, changing personnel in the business, quackery, commercial piracy, artificialities, etc., all intermingled with intelligence, success and solidarity of thinking by a minority of and within the industry. . . . .

. . . . .

"Extension reports do not in any appreciable degree show the work actually done. Confidences of constituents, details of the work which contribute to results, or how one thing complements the other, are the unwritten things that are responsible for most improvement. Rarely does an extension poultryman say: "I did this" and "I saved the industry so many millions of dollars." It is natural then to refer to press articles, meetings, events and to dwell upon certain phases of improvement made possible by the splendid cooperation of others, as the measure of extension results.

"This last report is written with mixed emotions and regrets. The problems of life are more real for and with those on the firing line than by those who live inside four walls protected in routine work by an institutional blanket. . . . Not one of the 18 consecutively written annual reports concerning poultry extension work has been satisfactory to the one doing extension work. The work has covered so many phases and has overlapped from year to year, to the extent that progress was accumulative and could not be easily blocked out into 365-day sections for report purposes.

"From the viewpoints of breeding, feeding, management, sanitation, quality, cooperative marketing, attitude of producers, and the relationships between cooperative and independent agencies, etc., I feel assured that the industry is a safer one in which to engage than it was 18 years ago. It has been a pleasure to have been associated with an industry during its formative years of growth and stabilization.

"A sincere desire is hereby expressed that due credit has been given all agencies who have so willingly cooperated in the long-time effort to better the positions of those engaged in poultry production as a farm business."



## GRASSHOPPER MEAL GIVES POOR RESULTS IN TURKEY RATIONS

The general belief that grasshoppers make an excellent turkey feed was not upheld in experiments at the Oklahoma A. & M. College feeding value test of grasshoppers under controlled conditions. The grasshoppers were caught in traps, dried, and ground into fine meal. One hundred pounds of live grasshoppers made about 33 pounds of feed.

### Fed to poults

Three lots of 6-weeks-old poults were put on rations which were basically composed of yellow cornmeal, wheat bran, wheat shorts, alfalfa leaf meal, and salt. The first lot had 7 pounds of meat scrap, 7 pounds of dried buttermilk, and 7 pounds of cottonseed meal.

The second lot had the same basic elements with the addition of 8 pounds of dried grasshoppers and smaller amounts of buttermilk and meat scrap. Lot 3 contained the same basic elements as the others except that 16 pounds of dried grasshoppers were added.

### Poults fail to gain

The poults in lot 3 became listless after eating this feed 2 or 3 days. The rate of growth for the first week declined in proportion to the amount of ground grasshoppers in the feed. During the second week the mortality of the poults in lot 3 was high, and those that survived made very little if any gain in body weight. Those birds remaining in lot 3 after the second week were placed on the ration fed in lot 1. Mortality stopped in 3 days.

The poults in lot 2 showed fair gains in body weight but made slower gains than the poults in lot 1 receiving no grasshoppers. At the end of 4 weeks the poults in lot 2 appeared ragged and some were dying. When the poults were given the regular ration without grasshoppers, mortality stopped and they soon regained a normal appearance.

### No disease found

A younger group that was fed the regular ration of lot 1 plus all the whole dry grasshoppers they would eat appeared normal until 5 weeks of age when they developed a condition similar to those fed the ground grasshoppers. Post mortem examinations in the laboratory failed to show the presence of disease in any of the poults.

The work is being continued in an effort to determine more definitely the value of grasshoppers in turkey feeding.

--Oklahoma Agricultural News Service.



## TURKEY AND ICE CREAM FAVORITE FOODS

Robert E. McCormick, president of the Boys' Athletic League, 70 Fifth Avenue, made public the results of a survey of the preferences of 22,416 boys and girls between the ages of 6 and 16 in regard to popular forms of food.

Forty-one percent of the boys questioned preferred turkey to all other meats. Hash ranged next with 23 percent of the votes and chicken ran a poor third with 12 percent. Scattering votes totaling 24 percent went to steak, roast beef, pork, bacon and other meats. Thirty-three percent of the girls voted for turkey and chicken barely nosed out hash with 24 to 23 percent of the vote respectively. The other meats polled a total of 20 percent.

For a vegetable, spinach proved the most popular among the boys, receiving 24 percent of the votes, with corn second and potatoes third. Corn was the most popular among the girls--30 percent of them voted for it--but spinach was close with 23 percent of the vote. Carrots ranked third with the girls, and potatoes came in last after a long list of green vegetables.

Ice cream swept the field as dessert with two-thirds of the girls and 38 percent of the boys voting for it. The boys ranked pie second and the girls' next choice was pudding. Bananas proved to be the most popular fruit among both boys and girls.

---New York Herald Tribune

## SUGGESTED POULTRY PROJECTS FOR 1938, WASHINGTON

GOAL -- Reduce laying house mortality.

Job. Secure \_\_\_\_\_ poultrymen who will start a program to eliminate coccidiosis by doing each of the following: (He may be doing some of them now).

- a. Confine chicks to house and sunporch till they are 6 to 10 weeks old, depending on season and weather.
- b. Have rubbers at entrance to brooder house (and later at entrance to range). Put rubbers on when entering the house and take them off before leaving. (A special box for rubbers may be nailed to house).
- c. Confine layers to hen house and sunporch at all times. (Use chicken yards for lawn or garden). Never let a hen escape from the house.
- d. Mature pullets in lots of 100 in Washington range shelters, on clean range after they are 6 to 10 weeks old. Clean range is land where no poultry manure has been spread, and where no chicken has ranged during the preceding year. Sodded range is best.

Note: The Western Washington Experiment Station at Puyallup has eliminated coccidiosis by following this program.



## BOTULINUS POISONING IN POULTRY FROM SPOILED CANNED FOODS

Reports have been received that in Montana a heavy mortality resulted in a flock of chickens that were fed a spoiled can of home-processed beans. This was most likely due to botulism poisoning (*Clostridium botulinum*), the spores of which, if sealed in the can, are not destroyed except by proper processing at temperatures reached only by using the pressure cooker.

In certain States human fatalities have resulted from this type of poisoning and the nutrition specialists are interested in securing information as to the canning methods used in preparing such food. They are having some difficulties to persuade homemakers to purchase pressure cookers for processing nonacid vegetables and meats.

Miss Miriam Birdseye, senior nutrition specialist, United States Department of Agriculture, Washington, D. C., would appreciate the cooperation of the poultry specialists in locating outbreaks of botulism in poultry caused from eating spoiled canned food. The following questionnaire form is suggested. Please send data direct to Miss Birdseye.

Name of Cooperator	Address	Approximate altitude
Size of flock	Percent sick	Percent died
Remarks on unusual symptoms		
Food causing outbreak		
How food was canned		
Water bath at 212° F.	:	Pressure cooker
Number of minutes	:	: Number of minutes
	:	: Pounds pressure
	:	:

Had pressure cooker gage been tested recently?

Was pressure increased 1 pound for each 2,000 feet above sea level?

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## FIND USE FOR 1-POUND COCKERELS IN MICHIGAN

"Michicken" is the name given to a delicacy turned out through the cooperation of the Poultry Department and the Home Economics Department of Michigan State College.

Studies indicated possibilities of more profit in marketing 1-pound chickens if appetizing dishes could be prepared, and experimental cookery by the Home Economics Department showed that it can be done.